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US006545142B1

(12) **United States Patent**
Winter et al.

(10) **Patent No.: US 6,545,142 B1**
(45) **Date of Patent: Apr. 8, 2003**

(54) **SINGLE DOMAIN LIGANDS, RECEPTORS COMPRISING SAID LIGANDS, METHODS FOR THEIR PRODUCTION, AND USE OF SAID LIGANDS AND RECEPTORS**

(75) Inventors: **Gregory Paul Winter**, Cambridge (GB); **Elizabeth Sally Ward**, Cambridge (GB); **Detlef Güssow**, Cambridge (GB)

(73) Assignee: **Medical Research Council of the United Kingdom**, London (GB)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/722,364**

(22) Filed: **Nov. 28, 2000**

Related U.S. Application Data

(60) Continuation of application No. 08/470,031, filed on Jun. 6, 1995, now Pat. No. 6,248,516, which is a division of application No. 08/332,046, filed on Nov. 1, 1994, now abandoned, which is a continuation of application No. 07/796,805, filed on Nov. 25, 1991, now abandoned, which is a division of application No. 07/580,374, filed on Sep. 11, 1990, now abandoned.

(30) **Foreign Application Priority Data**

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(52) **U.S. Cl.** **536/24.33**; 536/23.53
(58) **Field of Search** 536/24.33, 23.53

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(57) **ABSTRACT**

The present invention relates to single domain ligands derived from molecules in the immunoglobulin (Ig) superfamily, receptors comprising at least one such ligand, methods for cloning, amplifying and expressing DNA sequences encoding such ligands, preferably using the polymerase chain reaction, methods for the use of said DNA sequences in the production of Ig-type molecules and said ligands or receptors, and the use of said ligands or receptors in therapy, diagnosis or catalysis.

2 Claims, 23 Drawing Sheets